

Application No.: 09/943,914

Docket No.: 29248/37609

**AMENDMENTS TO THE CLAIMS****In the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 1-18 (canceled)

19. (New) An apparatus comprising:

a plurality of network elements coupled by connection media forming an active network;

a vehicle including the active network;

a first device operably disposed within the vehicle;

a second device operably disposed within the vehicle;

the first device and the second device being communicatively coupled by the active network; and

a data packet for communication of data between the first device and the second device via the active network;

wherein the network elements process the data packet within the active network based on an active portion of the data packet.

20. (New) The apparatus of claim 19, wherein the active portion comprises data selected from the group of data consisting of: data related to the configuration of the active network; data related to the operation of at least one of the first device and the second device;

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data defining a data packet header portion of the data packet; data defining a trailer portion of the data packet; data related to active network timing information; data related to a data packet state operable to direct the active network to communicate the data packet within the active network; data related to a receipt acknowledgement message; data related to a topology of the active network; data related to a communication path taken by a data packet through the network; data related to network traffic; data relating to instructions for modification of the data packet by one or more network elements; and data relating to functional interoperation of the first and second device.

21. (New) The apparatus of claim 20, wherein the data packet state represents at least one of a priority state indicating a routing preference for communicating the data packet; a priority state indicating a processing priority; and an error state.

22. (New) The apparatus of claim 20, wherein the network traffic comprises data relating to a rate of data packet flow between the network elements.

23. (New) The apparatus of claim 20, wherein the network traffic comprises data related to network element workload.

24. (New) The apparatus of claim 19, wherein at least one of the active network elements comprises an element selected from the group of elements consisting of a switch; a bridge and a router.

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25. (New) The apparatus of claim 19, wherein the network elements are operable to process the data packet based on the active portion.

26. (New) The apparatus of claim 25, wherein the network elements are operable to process the data packet to modify routing information stored in the data packet based on the configuration of the active network.

27. (New) The apparatus of claim 19, wherein the network elements are operable to process the data packet while the data packet is being communicated within the active network.

28. (New) The apparatus of claim 19, wherein the network elements are operable to process the data packet to modify a portion of the data packet based on the active portion of the data packet.

29. (New) The apparatus of claim 19, wherein the network elements are operable to process the data packet to modify the active portion of the data packet while the data packet is being communicated within the active network.

30. (New) The apparatus of claim 19, wherein the network elements are operable to execute a set of functional instructions stored in the active portion of the data packet.

31. (New) The apparatus of claim 19, wherein the network elements are operable to store a set of functional instructions received from the active portion of the data packet.

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32. (New) The apparatus of claim 19, wherein the network elements process a second data packet based on an active portion of the data packet.

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